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THE LIFE AND WORKS

OF

HEBERDEN.



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HEBERDEN.

An Essay for the Wix Prize at St. Bartholomew's Hospital.

BY

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LIST OF THE PRINCIPAL AUTHORITIES CONSULTED.

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THE LIFE AND WORKS OF HEBERDEN.

DR. HEBERDEN died in the year 1801, nearly eighty years ago. In reviewing the life and works of a man so long after his death, dependence must be placed on the testimony of others. There is no want of this in his case. The principal writers only have been named in the list of authorities given above. Their biographies contain a narrative of Dr. Heberden's life, and also their own opinions and judgments on his life and character. It will be the purpose of this Essay to separate these, and first, to verify the narrative by comparing various authorities and by gathering all the collateral evidence that is attainable. Secondly, to enquire how far the narrative thus verified bears out the judgments passed on Dr. Heberden's life and character by his contemporaries and subsequent biographers.

It can hardly be desirable after this lapse of time to construct from the materials of his life an entirely fresh estimate of his character. It is only fair to assume that those who lived in closer proximity to him possessed a far more intimate knowledge of the man than can be attained by any one at the present day. But the judgment of contemporaries is liable to be biassed by con-

siderations from which those at a distance are free. Whenever the testimony of earlier biographers is concurrent, and is supported by facts, it will be better to accept their judgments as verified, and to quote their own words rather than run the risk of distorting their expressions by any attempt at amendment. But where any doubt or contradiction appears, the best course will be to put aside opinions which may have been warped by partiality or prejudice, and to endeavour to arrive at the real truth by a thorough examination of the authenticated facts of Dr. Heberden's life, and the evidence contained in his writings.

The pursuance of this method will be facilitated by a simple division of the subject. His life and works will be considered separately.

First in order will be a simple narrative of his life, confined entirely to a statement of facts.

Secondly, the facts of this narrative will be compared with the judgments passed by various authors on the points of his character, illustrated by his life rather than by his literary and scientific works. And a selection of such of these judgments as seem to be verified will be given.

The third and fourth heads will consist of a similar treatment of his literary works; and, after a concise account of his principal works, an examination will be made of the evidence they contain as to his method of observation and inquiry, and the character of his professional practice.

Fifthly, and lastly, an attempt will be made to combine, as it were, the component parts of his nature. The moral qualities exhibited in his life must be com-

pared and united with his characteristics as a physician and as a writer on professional subjects, in order to arrive at as complete a judgment as may be of the man in his entirety.

The details now extant of Dr. Heberden's ancestors are so meagre and fragmentary as to preclude all attempts to trace any signs of hereditary intellect. Those details which have been collected will be found tabulated in Appendix A. The earliest known ancestor would appear to be his great grandfather, Edward Heberden, of Idsworth Park, Idsworth, near Petersfield, Hants, which place is said to have been in the possession of the family since the time of Queen Elizabeth. Then follows his grandfather Thomas, of Chichester; and then his father, Richard, of the parish of St. Saviour's, Southwark, who married Elizabeth Cooper.

Dr. Heberden, the subject of this memoir, was born in London, in the year 1710. He was the youngest son 1710. but one of a family of six, four sons and two daughters. It is sufficient for the purpose of this narrative to mention here one only of his brothers, Thomas, who was born 29th March, 1703, became M.D., F.R.S., and settled in Madeira. Of Dr. Heberden's boyhood there are no details, except the bare fact that on the 17th June, 1717, 1717, when he was seven years of age, he was admitted into æt. 7. the grammar school of St. Saviour's, Southwark, where he acquired the rudiments of his education. In the October of the same year his father died. At St. Saviour's he would appear to have acquitted himself with credit, and to have given signs of more than ordinary ability; for it is a tradition in the Heberden family that Dr. Heberden so gained the good opinion of his

1717, master as to induce him to persuade Mrs. Heberden to
 æt. 7. send the boy to Cambridge instead of putting him
 behind the counter, a course she had intended to take,
 owing to the family "being then in somewhat straitened
 circumstances." * From an entry in the records of
 St. Saviour's School it appears that at the seventh
 meeting of the gentlemen educated there, and at the
 1724, examination of the scholars, 17th November, 1724,
 æt. 14. Mr. Heberdine (since of St. John's College, Cambridge)
 took a part in the acting of the last two scenes in the
 "Phormio" of Terence.†

In 1724, when he was fourteen years old, Dr. Heber-
 den entered at St. John's College, Cambridge; and in
 1728, at eighteen years of age, took his B.A. degree.
 æt. 18. In 1730, in his twentieth year, he was elected Fellow of
 1730, his College, and from that time began to direct his atten-
 æt. 20. tion to the study of medicine, which he pursued partly at
 Cambridge and partly in London.‡ In 1732 he took his
 1732, M.A. degree. In 1739 he proceeded to the degree of
 æt. 22. M.D., and immediately afterwards began his professional
 1739, career at Cambridge, where he continued to practise
 æt. 29. for about ten years. During this time Dr. Heber-
 den read an annual course of lectures on Materia

* This, not found in any book, is here mentioned on the authority
 and with the permission of the present representatives of the Heber-
 den family.

† Quoted by Dr. Pettigrew, "Memoir of Dr. Heberden," p. 2.

‡ "Partim in nosocomio Londinensi." This is Dr. Heberden's
 own statement; cf. Dr. Pettigrew's "Mem." p. 5. But no evidence
 is forthcoming of Dr. Heberden's having been connected with any
 London hospital. Search made at St. George's Hospital, to see if
 Dr. Heberden, like his son and grandson, studied there, has proved
 fruitless, the records of Medical Students at that Hospital not ex-
 tending back to so early a date.

Medica: they were never published, but Dr. Pettigrew ^{1739-1740.} quotes extracts from a MS. in his possession containing twenty-nine lectures,* which will be again referred to in treating of his works.† The following distinguished men are mentioned among those who attended his lectures at this time: Sir George Baker, Bart., physician to their Majesties; Dr. Robert Glynn; Dr. Gisborne, President Coll. Physicians in 1797. At this time also Dr. Heberden was one of that Society of Friends,‡ contemporaries at the University of Cambridge, who were the authors of the "Athenian Letters," to which he contributed an article "On the State of Physic in Greece, including a Sketch of the Character of Hippocrates and his Works." §

In 1745 Dr. Heberden published his first work—a ^{1745, æt. 35.} pamphlet entitled "*Αντιθηριακα*; or, an Essay on Mithridaticum et Theriacum;" and in the following year, at the age of thirty-six, he was elected a Fellow of the Royal ^{1746, æt. 36.} College of Physicians. In 1748 Dr. Heberden was ^{1748, æt. 38.} induced by the recommendation of Sir Edward Hulse, Bart., Physician in Ordinary to the King, to leave Cambridge and settle in London. It appears from information communicated to Dr. Macmichael by Dr. W. Heberden, junior, that Sir Edward had some time previously made efforts to bring Dr. Heberden to London,

* Dr. Pettigrew, "Memoir of Dr. Heberden," p. 3.

† Infra, p. 25.

‡ "All their names were an ornament to the place." Preface, ed. 1781, "Athenian Letters."

§ Art. cxxxvi. Cleander to Alexias: "Athenian Letters." 2 vols. 1810.

1748,
æet. 38. having sent him a message to this effect by a friend * in his own profession, who not only never delivered the message, but sent back word that Dr. Heberden had no inclination to leave the University. Here the matter dropped for the time, but Sir Edward afterwards having become aware of how the case really stood, made an explanation to Dr. Heberden on the subject, at the same time strongly urging him to come to London, "as Dr. Shaw had then gone over to Hanover with the Duchess of Newcastle, and he believed that Dr. Heberden could never have a fairer opportunity for commencing practice in London." Dr. Heberden on this determined to come, and his reply is given at length by Dr. Macmichael.† Accordingly, at Christmas, 1748, when thirty-eight years of age, Heberden left Cambridge, where he had practised for about ten years, and having taken a house in Cecil Street, soon obtained a fairly large practice in London. When he found he could support himself in London, he voluntarily relinquished his fellowship at St. John's College, in the hope that it might prove of the same service to some poorer scholar that it had been to him.

1749,
æet. 39. In 1749 he was chosen a Fellow of the Royal Society, and to the Philosophical Transactions of this Society he afterwards was a frequent contributor.‡ In 1750 he presented to St. John's College a collection of specimens formed to illustrate his course of lectures on *Materia Medica*; and some years after he added to this gift a

* The name of this person is not mentioned, but it is stated that Dr. Heberden most generously lived on terms of friendship with him in after life. Dr. Macmichael, "The Gold-headed Cane," p. 174.

† "Gold-headed Cane," p. 173.

‡ For further details, cf. Appendix B.

valuable set of astronomical instruments. In 1752 Dr. ^{1752,}
 Heberden was summoned to meet Dr. Mead in consul- ^{æt. 42.}
 tation on the Duke of Leeds. It was on this occasion
 that he formed a resolution to retire early from his
 profession. He was struck by the impairment of
 the faculties of Dr. Mead. In consequence of this Dr.
 Heberden decided that it was better to leave work in
 good time rather than run the risk of continuing in
 practice after his powers had become enfeebled in the
 manner he had observed to be the case with Dr. Mead.
 To this resolution he subsequently adhered. In
 the same year he married Elizabeth, daughter of
 John Martin, Esq., of Overbury, in Worcestershire, and
 M.P. for Tewkesbury. In 1754, two years after this ^{1754,}
 marriage, his wife died, leaving him two sons—John, ^{æt. 44.}
 who died in infancy; Thomas, afterwards M.A., Canon
 Residentiary of Exeter, and ancestor of the elder branch
 of the Heberden family.* Six years after his bereave- ^{1760,}
 ment, Dr. Heberden married as his second wife Mary, ^{æt. 50.}
 eldest daughter of William Wollaston, Esq., and by her
 he had eight children, only two of whom survived him,
 viz., Mary, married Rev. G. Jenyns, Prebendary of
 Ely; William, afterwards M.D., F.R.S. The absence of
 detail regarding Dr. Heberden's ancestors and the conse-
 quent impossibility of tracing any signs of hereditary
 talent has already been commented on, but the contrary
 is the case with regard to Dr. Heberden's descendants.
 This is especially true with regard to his son Dr. William
 Heberden, who attained great eminence in his father's
 profession, and exhibited the same proficiency as a

* For further details, cf. Appendix A.

scholar. These circumstances lend sufficient interest to the life of Dr. William Heberden, junior, to render it worthy of a longer notice than could be given in this place without interrupting the thread of the narrative. A brief abstract of his life will be found in Appendix A.

1761,
æet. 51.

In 1761 Dr. Heberden was named by George III. Physician to Queen Charlotte, on her first coming to England, an honour he thought fit to decline, "because he was apprehensive it might interfere with those connections * of life which he had now formed." In the same year Dr. Heberden published from among Dr. Conyers Middleton's MSS. a curious tract entitled "*Dissert. de Servili Medicorum conditione. Appendix: Seu defensionis, pars secunda,*" with a short but elegant advertisement in Latin, by himself. In connection with these MSS., which were bequeathed to Dr. Heberden by Mrs. Conyers Middleton after her husband's death, the following incident is related by Dr. Macmichael:—"After the death of Dr. Conyers Middleton, his widow called on Dr. Heberden with a MS. treatise of Dr. Conyers Middleton's, to consult him about its publication. Dr. Heberden having read the MS., which was on "*The Inefficacy of Prayer,*" and thinking that, though worthy of his learning, it would be in no way creditable to the

* "*Gold-headed Cane,*" Dr. Macmichael, p. 175. In the "*Encycl. Britannica*" (8th ed. 1856), vol. xi., article '*Heberden,*' the writer states: "Dr. Heberden's extensive practice made it inconvenient for him to accept this appointment, but he took advantage of the esteem and regard the king had always shown him, to suggest as his substitute for the situation Dr. Letherland, a man of great science and learning, but of retired habits and but little known even in his own profession, and the king showed his appreciation of this disinterested recommendation by at once appointing Dr. Letherland to the situation."

principles and would be injurious to the memory of her husband, and having found that a publisher would give £150 for the copyright, he himself gave the widow £200, and destroyed the MS." * In 1763 he printed entirely at his own expense a most valuable edition of the "Supplices Mulieres" of Euripides, with notes by J. Markland. 1763, æt. 53.

In 1766 Dr. Heberden recommended to the College of Physicians the first design of the Medical Transactions, a series of papers on the same plan as that adopted by the Royal Society in England, and by various foreign societies, for their Transactions. In this year his son William was born, who afterwards became M.D., F.R.S., and whose career has already been noticed. 1766, æt. 56. 1767, æt. 57.

In 1778 Dr. Heberden was elected an Honorary Member of the Royal Society of Medicine at Paris. At this time Dr. Heberden had attained a position of celebrity, as is shown by the following extract from Cowper's poem on "Retirement," written in this year:— 1778, æt. 68. 1781, æt. 71.

"Virtuous and faithful Heberden, whose skill
Attempts no task it cannot well fulfil,
Gives melancholy up to Nature's care,
And sends the patient into purer air." †

In 1782 Dr. Heberden, then in his seventy-third year, began to withdraw himself from practice in accordance with the resolution he had made. As a first step towards this, he accustomed himself to spend the summer at Windsor, returning to his usual practice in London during the winter months. At this time he arranged and revised 1782, æt. 72.

* "Gold-headed Cane." For a slightly different account by Dr. Cole, cf. Dr. Pettigrew's "Memoirs of Dr. Heberden," p. 7.

† Extract from William Cowper's poem "Retirement," written in 1781.

1783- his "Commentaries." * In 1783-4 Dr. Heberden was
 1784. one of the physicians in attendance on Dr. Johnson in
 his last illness, and that his professional services and
 scholarship were equally appreciated by his eminent
 patient, appears from Dr. Johnson's own letters,† and also
 from the following incident related by Boswell:—"Dr.
 Johnson being asked in his last illness what physician he
 had sent for, 'Dr. Heberden,' replied he, 'ultimus Ro-
 manorum, the last of our learned physicians.'"‡ In
 1785, August, 1785, Dr. Heberden read his last paper at the
 æt. 75. College, "Of the Measles."§ In 1787 he was elected
 1787, Vice-President of the Royal Humane Society. In 1796,
 æt. 77. in the eighty-seventh year of his age, when attending the
 1796, service in the Chapel Royal, St. James, he fell and frac-
 æt. 86. tured his thigh.|| This disabled him for the rest of his
 life from taking walking exercise, of which he had been
 very fond.

1800, It is customary for complimentary reference to be made
 æt. 90. in the Harveian Oration to the services of distinguished
 members of the profession; very rarely are references of
 this kind made in the case of a man during his lifetime,
 and whenever this rule is broken it is an unusual testi-

* See Appendix B.

† Dr. Johnson's letters: Letter to Mrs. Thrale, 17th June, 1779.
 Letter to Rev. John Taylor, 17th June, 1783. Letter to Dr. Heber-
 den, 13th Oct., 1784.

‡ Boswell's "Life of Johnson."

§ "Med. Trans." vol. iii.

|| The following lines are stated to have been aptly quoted on this
 occasion:—

"Nec te tua plurima, Pantheu,
 Labentem pietas, nec Apollinis infula texit."
Virgil's Æneid, lib. ii. 429—430.

mony to merit. This high honour was paid to Dr. ^{1800,} Heberden. ^{æt. 90.} He lived to hear himself spoken of in terms that show how highly his personal worth was estimated by all members of his profession. The passage occurs in the Harveian Oration for the year 1800, and may well be given at length :—

“Cum autem de virtute nondum ex oculis sublatâ apud nos agitur, ecquis est, Auditores, cui non mentem statim subeat vir ille egregius, multisque nominibus colendus, qui spatio vitæ ultra communem vivendi conditionem protracto, et æqualibus fere superstes nec ingenio suo acri et acuto, nec subtili judicio, nec rerum memoriæ, nec amorì literarum, nec denique pietati in hanc domum etiam num superfuit? Ille, nimirum cui artem exercenti medicorum gens adsurgebat omnis—quem omnes in antiquâ literaturâ versati imprimis habent—quem Physici agnoscunt suum. Talem virum et vivere, et valere, et nostrum esse nobismet gratulari licet.” . . . “Valeas! itaque fortunate Senex, otioque literato, et doctorum hominum colloquiis, et vitæ tuæ anteactæ recordatione diu perfruaris! insigne medicis exemplum relicturus, amplam dicendi materiem oratori.” *

On the 17th May, 1801, Dr. Heberden, then in the ^{1801,} ninety-second year of his age, and Senior Fellow of the ^{æt. 91.} College of Physicians, died at his residence in Pall Mall. He was buried in the parish church at Windsor.

The whole record of this long life, collected without favour or partiality from every available source, presents an unbroken series of instances of actions and conduct

* Harveian Oration, Oct. 1800. By Henry Vaughan, M.D., Physician Extraor. to the King.

that all point in one direction, and all bear witness to the possession of the highest moral qualities that can adorn a truly admirable character. On the other hand, no adverse testimony appears, and therefore what might at first be deemed the language of panegyric in the praise bestowed on Dr. Heberden by successive writers, is proved by unshaken evidence to be no more than well-merited approbation. Of his purely professional attainments, further evidence will be forthcoming from a consideration of his works. But the chief features of his private character, and the moral qualities that aid and exalt a professional reputation in conjunction with its scientific elements, are well pointed out in the following passages. Dr. Macmichael says, "Dr. Heberden was forward in encouraging all objects of science and literature, and promoting all useful institutions. There was scarcely a public charity to which he did not subscribe, or any work of merit to which he did not give his support. His address was pleasing and unaffected; his observations cautious and profound. He had a happy manner of getting able men to exhibit their several talents, which he directed and moderated with singular attention and good humour." * Dr. W. Heberden, jun., says, "From his early youth he had always entertained a deep sense of religion, a consummate love of virtue, an ardent thirst after knowledge, and an ardent desire to promote the welfare and happiness of all mankind. By these qualities, accompanied by great sweetness of manners, he acquired the love and esteem of all good men, in a degree which perhaps very few have expe-

* Dr. Macmichael, "Gold-headed Cane," pp. 176 and 178.

rienced; and after passing an active life, with the uniform testimony of a good conscience, he became an eminent example of its influence in the cheerfulness and serenity of his latest age." *

Dr. Heberden was undoubtedly one of the best classical scholars of his day. That he received a sound classical education at school may be inferred from the record of the part he took in the acting of the "Phormio" of Terence. At college he was one of that society of friends and contemporaries at the University of Cambridge "whose names were all an ornament to their University," and among whose first literary productions—the "Athenian Letters"—appears a critical essay of no common merit by Dr. Heberden. The numerous quotations that illustrate and adorn his lectures on *Materia Medica*, afford ample proof of his thorough acquaintance with the works of the best classical authors. Testimony is borne to Dr. Heberden's Hebrew scholarship by Bishop Newcome in his work on "The Twelve Minor Prophets," Haggai ii. 3, 7, 8, 9: "After I had finished these notes, as to their scope and substance, I received the following valuable communication from the learned and respectable Dr. Heberden,† which will give the reader great assistance in determining the sense of

* Comment. p. v. and vi., 4th ed. London, 1816.

† An extract from this communication is of sufficient interest to be quoted here: "The most plausible objections to the Christian religion have been made out of the weak arguments which have been adduced in its support; and can there be a weaker argument than that which sets out with doing violence to the original text in order to form a prophecy, and then contradicts the express testimony of the best historian of those times, in order to show that it has been accomplished"?

the prophecy now under discussion." In after life, though such time as could be spared from the active work of his profession was mainly devoted to professional writing, he still continued to maintain an intimacy with the chief scientific and literary men of his day, and his liberal patronage of works of erudition and merit is exemplified by his printing, entirely at his own expense, a valuable edition of the "*Supplices Mulieres*" of Euripides, with notes by Mr. Markland, who afterwards dedicated to Dr. Heberden his "*Iphigenia in Aulide et in Tauris*." Indeed, he carried this patronage to an extent which evoked the admiration and gratitude of the great scholars of his time. Hoogeveen says in the preface to his work on the Greek particles: "*Immortales gratias habeo referoque Gulielmo Heberdeno qui insignem mei existimationem plena humanitatis epistola testatus, non tantum decem sibi exemplaria destinavit, sed et quam plurimos, sua auctoritate et eruditionis fama motos, non dicam excitavit, sed et ardore replevit, quo et ipsi impulsos alios rursus atque alios allexerint, quo factum ut subscribentium numerus brevissimo tempore ad centum usque et triginta accreverit: imo viri humanitatem nullis limitibus circumscriptam, et incredibile literarum earumque cultorum patrocinium satis admirari non potui.*" *

Dr. Heberden's professional writings were numerous, and for convenience of reference they have been tabulated in Appendix B. Dr. Pettigrew gives a list, numbering twenty-four in all, and comments on some at

* Hoogeveen's "*Doctrina Particularum Græcæ linguæ*," 2 vols. 4to. 1769. Præfatio.

considerable length, viz., "The Lectures on Materia Medica," the Papers in Phil. and Med. Trans., in particular; "Remarks on the Pulse," "On the Hectic Fever," and "On the Chicken-pox." Many other authors refer to Heberden's professional writings.* All bear unanimous testimony to the scrupulous accuracy he displayed, to his preference for facts, and for the careful observation and study of detail rather than the opinions and authority of others. Dr. Pettigrew says, "The accuracy and consequent value of the observations themselves are unquestionable."† One of the best known of all his works is his account of Angina Pectoris. He was the first to make a connected series of observations on this disease, and they are admitted as accurate at the present day. Professor Gairdner says, "Heberden founded a minute and exact clinical description upon the observation of not less than twenty cases, of which, he informs us, six had been known to him as having perished suddenly. Heberden's account of the 'Disorder of the Breast,' accordingly, soon became known to medical men in various countries as an accurate and comprehensive sketch of a new disease."‡

It is remarkable that while all these authorities concur in testifying to the great merits of Dr. Heberden as a painstaking and accurate observer, yet his name has not

* Prof. Gairdner, art. 'Angina Pectoris'; Dr. Gee, art. 'Varicella.' Reynolds, "Syst. Medicine," vols. iii. and iv.; Dr. Latham, "Lect. on Diseases of the Heart," vol. ii. p. 383 *et seq.* London, 1846.

† Dr. Pettigrew, p. 18.

‡ Prof. Gairdner, art. 'Ang. Pectoris'; Reynolds, "Syst. Med." vol. iv. p. 600.

been connected with any great generalisation or brilliant discovery. Indeed, Dr. Pettigrew says his treatment was chiefly palliative, and attributes to him "inertness of practice," and "want of systematic arrangement." A much clearer light is thrown upon this view of Heberden's treatment by the following passage in which Professor Gairdner says, "The treatment of angina pectoris naturally resolves itself into two departments, viz., that of the paroxysm and that of the intervals. The former treatment is essentially palliative. . . . Heberden's views of treatment were limited to the first indication—the control of the paroxysm."* It appears from a careful study of Dr. Heberden's writings that the apparently unfavourable remarks already quoted from Dr. Pettigrew convey no more than a partial truth. It may fairly be said that he seldom advanced any novel or striking propositions, that the inferences he drew from his observations were guarded, and limited in extent; and that the treatment he recommended was mostly palliative; but there is reason to believe that these characteristics were the outcome of a truly philosophical spirit, and altogether foreign to a want of regular system. In connection with his remarks upon Dr. Heberden's treatment and practice, Dr. Pettigrew refers to some observations to be found in his "Life of Dr. Baillie." On tracing the passage to which Dr. Pettigrew refers, it appears that it contains not a statement of Dr. Pettigrew's own opinion, but a quotation from Dr. Wardrop's "Life of Baillie." The passage is as follows, and seems quite in keeping with

* Reynolds, "Syst. Med." vol. iv. p. 586. 'Angina Pectoris.'

the view already taken of Dr. Heberden's philosophical character. "In the practical part of medicine, which in its application to individual cases may be said in many respects to be conjectural, the more a man advances in years, the more does he find how limited has been his knowledge and how much he has still to learn. No one seemed to be more aware of this than Dr. Baillie; and I have frequently observed this superior knowledge of his art lead to the remark that his practice was inert; for when he perceived certain and irremediable changes in disease, or when they had a fatal character from their commencement, he would merely attempt to palliate, whilst a practitioner not possessing his accurate knowledge would have made fruitless efforts to cure the disease."*

Dr. Pettigrew's remarks on want of systematic arrangement refer to "The Commentaries." No doubt he is right in saying that a mere alphabetical arrangement does not possess the value attaching to a philosophical classification. But with all deference to so high an authority it may be doubted if this is sufficient ground on which to base a charge of want of systematic arrangement. A thorough system of classification can only be the product of successive stages of development, and if a writer from any cause leaves a portion of his work incomplete, the answer to the question whether or not he has proceeded with due attention to method, must be sought rather in the details of the construction than in the mere form of the work. Now, the "Commentaries" of Dr. Heberden supply evidence to show, firstly,

* "Biograph. Mem. of Dr. Baillie," by James Wardrop, M.D. 2 vols. 8vo. 1825.

that he did not regard them as complete in form; and secondly, that they were compiled in the most methodical and systematic manner up to the stage at which he left them.

For, on the first head, he apologises in his preface to the "Commentaries" for the incomplete state of the work, which he says it would be useless to attempt to rectify at his advanced age. "A useful addition might have been made to these papers by comparing them with the current doctrine of diseases and remedies, as also with what is laid down in practical writers, and with the accounts of those who treat of the dissections of morbid bodies; but, at my advanced age, it would be to no purpose to think of such an undertaking."

Secondly, with regard to the method of compilation, he gives some valuable particulars which will presently be examined in detail. It is difficult to see how Dr. Pettigrew's reflections can be supported in the face of this evidence, but there remain other criticisms which have been passed on the "Commentaries" from a different point of view.

The style in which the "Commentaries" are written is unfavourably criticised in the article on Heberden in the "Encyclopædia Britannica," but not without an important qualification. The passage is as follows:—"We find in them a greater mass of valuable matter, accurately observed and candidly related, than in almost any other volume which has ever appeared upon a medical subject. Yet they are but too likely to chill the ingenuous ardour of many a youthful mind, and even to lead to a total apathy with respect to the diligent study of a profession

in which so respectable a veteran was so often disposed to exclaim ‘All is vanity.’” But the writer adds, “The more experienced a physician the more he will be in general inclined to approach the opinions or esteem the writings of Dr. Heberden.”* Now it appears from other sources, as well as from Dr. Heberden’s own writings, that in his career as a college lecturer, when it was his purpose to arouse the interest of his pupils and to excite their sympathies, he made full use of his scholarship to ornament his discourses and render them more attractive. Dr. Pettigrew, speaking of the lectures on *Materia Medica*, says: “Throughout the course numerous illustrations occur, and references are given to authors ancient and modern. These are not confined to the writers on medicine, but embrace numerous quotations from the Greek and Latin poets, and show the extent of Dr. Heberden’s reading in the higher walks of classical literature. Homer, Plautus, Plutarch, Vitruvius, Virgil, Horace, Lucretius, Cicero, Ovid, Persius, Lucan, Catullus, Juvenal, and Pliny, are all made to illustrate and adorn his discourses.”† Does it not tend to support, rather than to diminish his philosophical character, that in later life, when no longer speaking as a college lecturer, Heberden wholly abandoned this style, and preferred to present his subjects in the “dry light” of science?

That this change was deliberate on his part rests on no mere supposition, but is proved by the alterations he made in his previous writings to qualify them for admission into his “Commentaries.” The latter he

* “*Encycl. Brit.*” 8th edit. 1856. Art. ‘Heberden.’

† Dr. Pettigrew, p. 3.

has told us consist of nothing but facts gathered by his own personal observation. To satisfy these rigorous conditions, not only the decorations of style, but everything in the nature of hypothesis or of doubtful inference, had to be ruthlessly excised; and there is proof that this was actually done by him, as will be seen hereafter. But there is no need to trust to his "Commentaries" alone for evidence that his work was constantly and scrupulously conducted on the principles of philosophical method. The writers already quoted have drawn their conclusions from a general survey of his writings, and this may well be supplemented by an analysis of a typical portion of his work, with the view to lay bare the method he employed in the course of observation and inquiry that has gained such lasting appreciation. His method when thus analysed, will be found to be a model of scientific investigation. It is remarkable not only for its thoroughly logical and regular system of procedure, but also for the consistency with which that system is constantly applied to sift previous or pre-conceived opinions and authority, as well as to check the inferences and conclusions arrived at. It seems desirable to select for the purpose of this analysis, one of the minor subjects of his inquiries. Bacon says: "It often comes to pass that mean and small things discover great better than great can discover small, and therefore it was well observed by Aristotle, 'That the nature of everything is best seen in its smallest portions.'"^{*} Whatever of care, judgment, and logical method are found displayed in the treatment of a subject of minor importance, must be due to the ordinary character

^{*} Bacon, "De Aug.," Spedding's trans., vol. iv. p. 297.

of his work. The nature of his work will there be seen in its normal condition, and not exalted or strained as it might be by the elevating interest of a great and important subject. To meet these considerations, the paper on "Essera"* has been selected, which in the year 1769 was read before the College of Physicians by Dr. Heberden, then in his sixtieth year, and consequently in the full tide of his experience.

Dr. Heberden prefaces this essay on "Nettle-rash" with an apology for treating at length of a disorder which, he says, has been very generally considered as too insignificant to deserve much notice at the hands of former writers. He says that this malady has been thus disregarded because it is not dangerous to life, but he thinks that its extreme troublesomeness and torment may be considered a sufficient reason for its receiving greater attention. This opinion of Dr. Heberden's illustrates the humanity of his disposition. He was as zealous to give his time and attention to alleviate minor forms of suffering, irrespective of the importance of their causes, as he was to engage in the deeper questions of mortal disease. Dr. Heberden then briefly deals with the literature of the subject, and explains the origin of the English name. He avails himself of the name of Essera (adopted by Senertus and other ancient writers), without discussion. "Whether," he says, "they are right or wrong is no great moment, as this is just as good a name as any other. I shall follow their authority in speaking of it under this appellation."† In avoiding the unnecessary creation of

* Publ. 1772, "Med. Trans." vol. ii. p. 173 *et seq.*

† "Med. Trans." vol. ii. p. 173 ; "Comment." chap. 35, p. 142.

new terms, he seems to follow the principle Bacon laid down for himself. "But to me . . . (who desire . . . to ground a sociable intercourse between the old and new in learning), it seems best to keep way with antiquity in all things lawful, and to retain the antient terms, though I often alter their sense and definitions."*

Dr. Heberden, having taken this much from the ancients, proceeds at once to deal with facts of his own experience and observation, and enters into a detailed description of nettle-rash. First, considering all the cases within his experience, their general and particular characters, he arrives at the conclusion that no part of the body is exempt from this malady; and although in the severer forms of the malady there is often more local disturbance manifested in the arms, face, and hands, yet there is not enough evidence to justify him in concluding that these parts are particularly liable to it. Dr. Heberden next considers to what degree liability to the disorder is affected by various conditions. He discusses these conditions in two groups, which may be broadly distinguished as the subjective and objective groups. And first, as to the subjective group, which includes the following :—

- (1) *Bodily organisation.*
- (2) *Difference of time of life.*
- (3) *State of system.*
- (4) *Incidental complications.*

From the first three of these heads, he concludes that no difference in the liability to the disorder can be attributed to any of these conditions. Under the fourth

* Bacon, "De Aug." (Spedding's Trans.) vol. iv. ch. 4, p. 344.

head he concludes "that the majority experience no other evil from it besides the intolerable anguish arising from the itching."

He next deals with the second or objective group of conditions, including:—

- (1) *Internal or external applications.*
- (2) *Seasons of the year.*
- (3) *Temperature.*
- (4) *Friction.*

He concludes that the effects of none of these conditions can be said to be constant, except that of No. 4—Friction,—which hardly ever fails to bring on the itching and eminences in those who are naturally subject to this disorder.

This inquiry is a striking example of careful observation and power of analysis. It is not too much to say that a system of gradually building up a body of evidence from a long continued series of actual and accurate observations, excluding all inferences from hearsay or previous authority, is the foundation of modern science. His method of collecting details and particulars is thus recorded in the Preface to his "Commentaries":—"His notes," he says, "were taken in the chambers of the sick, from themselves, or from their attendants; they were read over every month, and such facts as tended to throw any light upon the history of a distemper or upon the effects of a remedy, were entered under the title of the distemper in another book, from which were extracted all the particulars relating to the nature and cure of disease." He expresses his opinion on this subject in his preface to a paper on the "Measles":—"The perfect

history of a disease can only be collected from several descriptions, given by those who were themselves the observers, and write, not from other books, but from nature." *

Dr. Heberden next inquires into the efficacy of the local application of oil, vinegar, and spirits of wine, as sometimes mitigating the itching and affording a little present relief. His next step is to form a definition of nettle-rash. He first gives a description of the varieties met with, these being dependent on the shapes of the eminences, which sometimes appear as little risings like the effects of nettle-stings, sometimes as long wheals. But whatever the shape of the eminences, they are always solid, that is to say, they never present a cavity containing any liquid. Now, on this diagnostic character,† namely, the solidity of the eminences, depends the essential distinction between nettle-rash and scabies, each of which, for want of observation of this point, has often been confounded with the other. This distinction he confirms by the observation of the fact that, unlike itch, nettle-rash is not infectious.

In the observation of these facts, and in the reasoning founded upon them, Dr. Heberden pursues the true course of the analytical or inductive method by agreement and difference, leading to conclusions more or less general. But in considering the liability to the disorder as affected by the above conditions, he seems to have

* "Trans. Med." vol. iii. p. 390.

† It is noticeable that this diagnostic character being a definite conclusion is inserted into the "Commentaries" *as a fact*. Comment., chap. 35, p. 145. Eng. trans., 4th ed. 1816.

paid too little attention to that one condition which has since proved to be the most essential of all—viz., the disordered state of the stomach. There is no flaw in his method of inquiry, but it was not sufficiently exhaustive. That is to say, he was content with the conclusion that no condition is indispensable, and did not further prosecute his inquiry to see whether some one condition, without being invariable, was not more constantly present than any other. The same remark applies to the next part of his paper, in which he proceeds to consider the cause or antecedent of Essera. Having already established its one invariable effect and its non-dependence on any particular condition, and taking into consideration along with these two facts the slightness of the effect produced, he concludes that there is evidence to suggest some external mechanical cause. Is it, he asks, impossible that the Essera should arise from some such cause? The answer is—Possible in some cases.

Dr. Heberden is too careful to draw a general conclusion that the disease is due to mechanical causes; he detected a general similarity among the instances he had assembled sufficient to suggest this as a possible cause. He concluded, in short, not that there was such a cause, but that the evidence “might incline us to look out for some such cause,” which would satisfy the conditions of the case. In short, he adopted this as a trial hypothesis. In pursuing this investigation, Dr. Heberden goes beyond the limits of his own observation, and gathers from the writings of Reaumur* that a possible cause may

* Reaumur, “Hist. Insect.” tom. ii. mem. iv.

be minute hairs. The action of this cause he limits to cases of short duration, since even this, the most probable of all mechanical causes, is rendered improbable in cases of long duration, where the strictest attention has been paid to personal cleanliness. At the same time external mechanical causes of any or every kind are incompatible with the fact of Essera following the internal administration of Valerian root; and this conclusion is confirmed by the similarity of effects produced by certain articles of food, *e. g.*, shell-fish, fungi, &c.* Dr. Heberden perceived that he could draw no certain conclusion as to the causes of nettle-rash, as he had done in the case of the determination of its diagnostic character, and consequently excludes from his "Commentaries" the whole of the above investigation and inference, though they had evidently been elaborated with scrupulous care.† Probably this exclusion is due to the fact that Dr. Heberden based his inference on the writings of others, and not solely on his own observations; for he particularly states in the Preface to his "Commentaries" that their contents are limited to actual facts of observation. Here, again, he seems to have followed in the steps of Bacon: "For I admit nothing but on the faith of eyes, or, at least, of careful and severe examination."‡ Professor Gairdner has remarked on this very point of contrast, which he thinks adds to the value of the "Commentaries":—"The eminently careful and exact use of

* "Med. Trans." vol. ii. p. 216. An Account of the Noxious Effects of some Fungi, by W. Heberden. Read at the College, 1770.

† "Comment." chap. 35, p. 142. "Med. Trans.," vol. ii. pp. 179-184.

‡ Bacon, Op. (Spedding's Eng. trans.) 1858, vol. iv. p. 30.

language by Heberden in his singularly condensed clinical studies, whether in Latin or in English, tends to invite attention to even the minutest discrepancies between his earlier and later statements." * "The careful manner in which Heberden's own experience had been 'matured' (so to speak) for publication, appears very clearly in these incidental remarks." †

Dr. Heberden, leaving the cause of Essera an open question, passes on to consider its treatment; and he concludes by recommending a palliative treatment. In his opinion, a wash or ointment, sufficient to allay the itching certainly and expeditiously, was all that seemed to be required. Before quitting this part of the subject, it is desirable to refer again to the character of some of the conclusions drawn by Dr. Heberden in the course of his inquiries. "Liability to this disorder," he says, "cannot be shown to depend on any essential condition." The extent to which this conclusion fell short of the mark has already been pointed out. And the view taken above, that the general excellence of Dr. Heberden's investigations was accompanied by a tendency to overlook some conditions, which, though not invariably present, have been proved by subsequent researches to be of considerable importance, appears to be supported by some remarks made by Professor Gairdner, in reviewing Heberden's investigations of Angina Pectoris. The passage is as follows:—"On endeavouring, as Dr. Latham has done, to grasp the essential principles of

* Reynolds, "System of Medicine," vol. iv. p. 536. Art. 'Angina Pectoris.' Prof. Gairdner (comparing "Comment." sect. lxx. with "Med. Trans." vol. ii. p. 59).

† Ibid. p. 559.

the (Dr. Heberden's) argument, as seen through a somewhat obsolete phraseology, we may readily assent to them, even if we should suppose that Heberden, in his desire to prove Angina Pectoris a neurosis, may have somewhat neglected the evidence of its being often associated with organic disease. Now, as in the time of Heberden, we may assuredly claim for Angina Pectoris a place among the neuroses, even while the admission is freely made that the element of neurosis is often superinduced upon organic, too often, indeed, incurable disease in the heart itself, or in its nutrient vessels, or in the first part of the aorta." *

The results of this analysis would seem to fully justify the anticipations previously formed as to the philosophic character of Dr. Heberden's mind and work, and to exemplify his constant use of scientific principles, of systematic arrangement, and of logical method. He was not wont to adduce the authority of others, or to parade the results of his scholarship, but in the method and character of his work there is abundant evidence that he was imbued with the true spirit of the modern inductive philosophy. The enumeration of instances, the inductive establishments of an invariable concomitant, the formation of a trial hypothesis, and the correction and limitation of this by experiment, and by exclusion of contrary cases, afford a complete example of the employment of the Analytical or Inductive Method which Harvey practised, which Bacon taught, and by which Newton attained his marvellous results. The judgment passed on Dr.

* Reynolds, "System. Med." vol. iv. p. 569 *et seq.* Art. 'Angina Pectoris,' Prof. Gairdner.

Abernethy by Dr. Macilwhain seems equally applicable to Dr. Heberden: "He was a pioneer rather than a brilliant generaliser." Unlike the illustrious men just mentioned, and a few who have followed in their steps, Heberden did not succeed in making any brilliant discovery, or in establishing any great generalisation, or any universal law. But this did not cause him to remain idle or to despair. He was content to work on, and to do his best, to accumulate a valuable body of materials for those who came after him, that they might carry on the work and possibly attain to a goal which he believed to lie beyond his reach. This belief he has recorded in the conclusion to his "Commentaries;" thus:—"The art of healing has scarcely hitherto had any guide but the slow one of experience, and has yet made no illustrious advances by the help of reason; nor will it probably make any, till Providence thinks fit to bless mankind by sending into the world some superior Genius capable of contemplating the animated world with the sagacity shown by Newton in the inanimate, and of discovering that great principle of life, upon which its existence depends, and by which all its functions are governed and directed."* Surely it is justifiable to conclude that Dr. Heberden is entitled to rank as a true philosopher, but not as one of the great scientific discoverers. The absence of any brilliant result was no doubt in part due to the fact that the science he was dealing with did not admit of the application of that mathematically exact method of investigation by which Newton attained his splendid results, but Harvey grappled successfully with

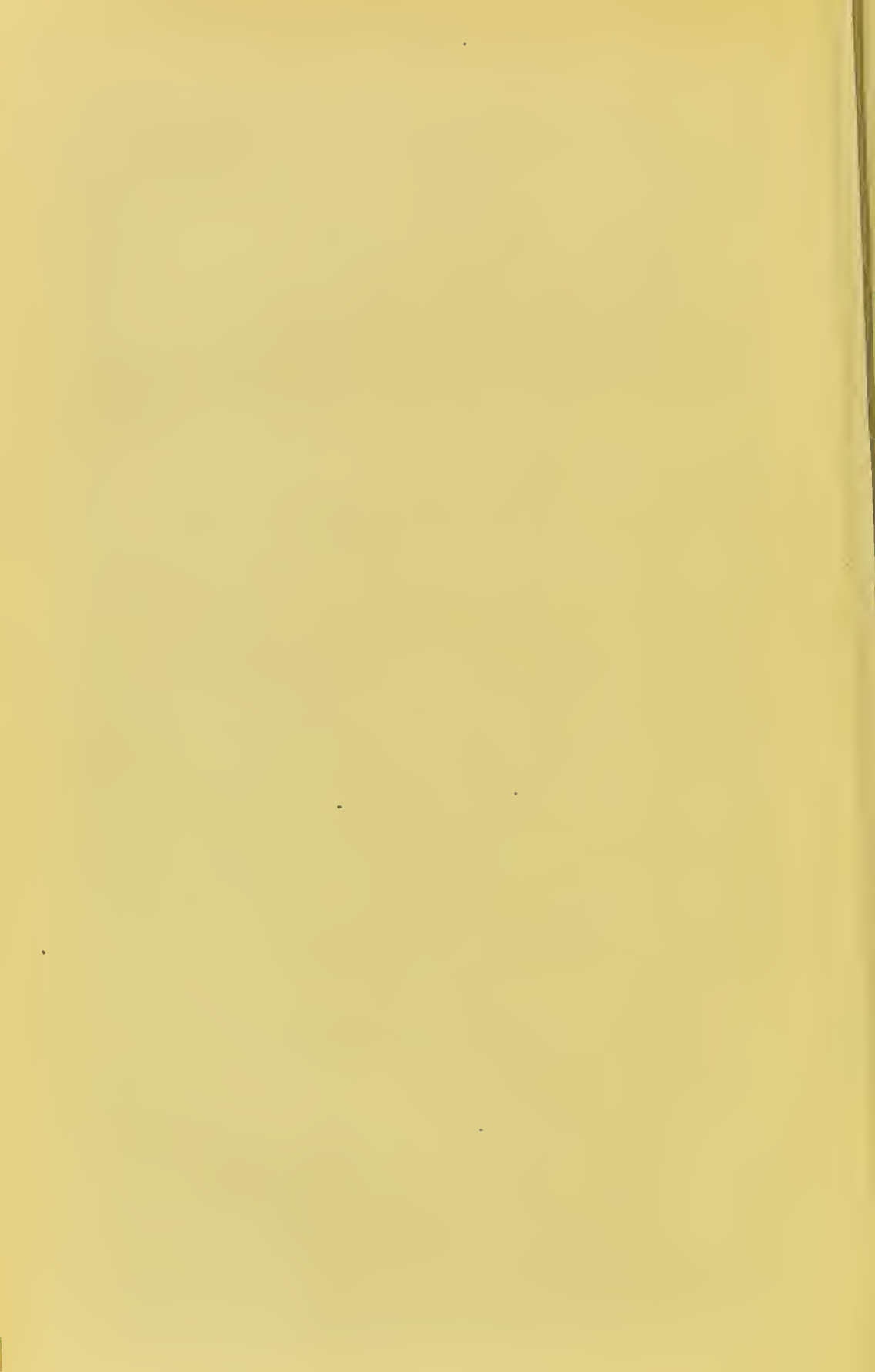
* "Comment." conclusion, p. 40-44. Eng. trans. London, 1816.

the same difficulties, and it appears from a careful study of Dr. Heberden's works that in his case there is some evidence to indicate want of concentration as an additional retarding cause. This want of concentration would be amply accounted for by the possession of wide scholarship such as Dr. Heberden has been shown above to have acquired. For great scholarship, exciting as it did in his generous nature a deep sympathy with all that promised to aid the "advancement of learning," must tend to create general interest and catholicity of thought rather than special and continuous application to one particular subject. This wide range of thought is but seldom consonant with that long continued brooding over one particular problem or line of inquiry which has been remarked as a chief characteristic of the greatest discoverers.

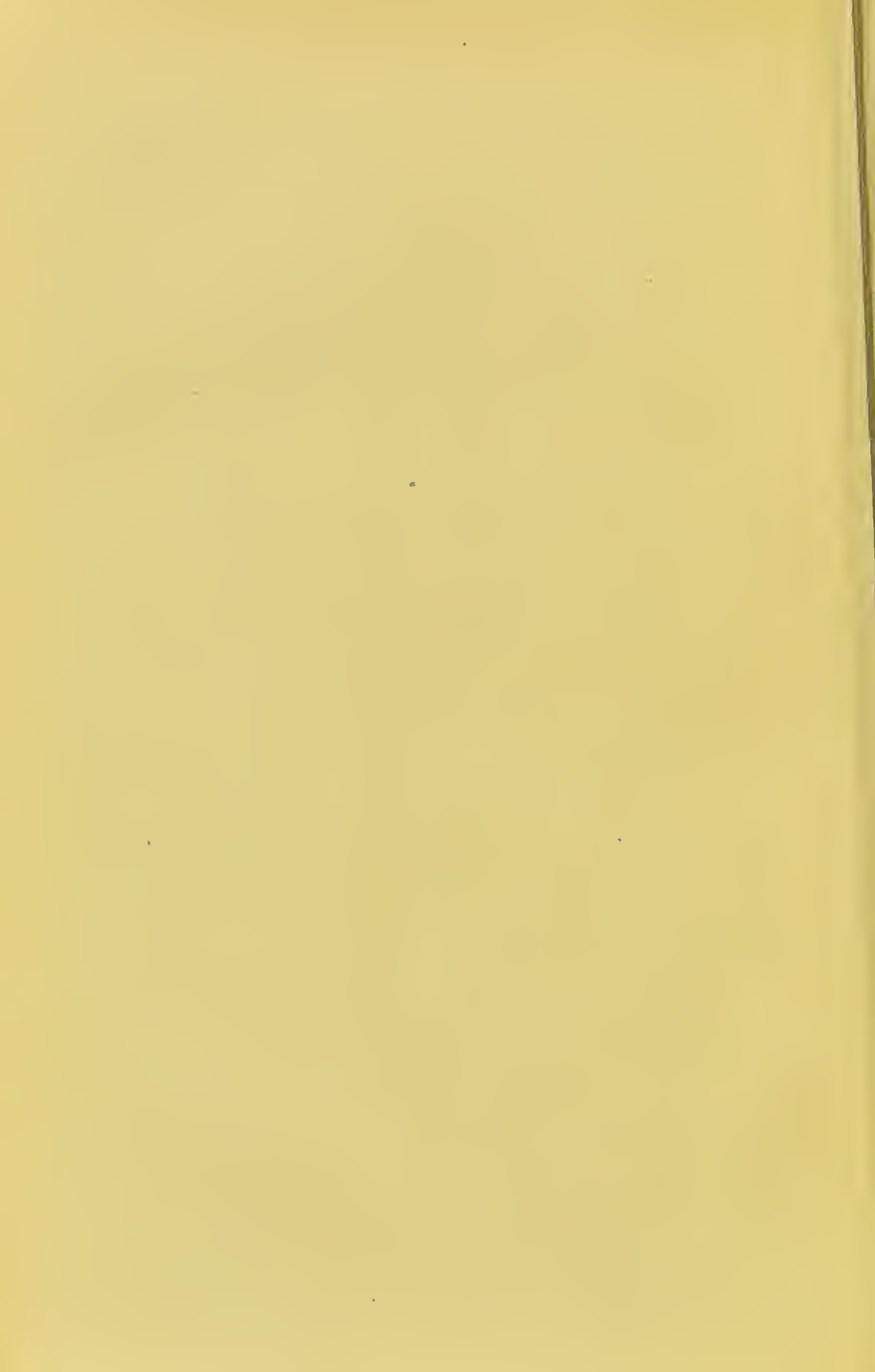
It results then that to the opinion already expressed of the excellence of his general nature and moral qualities may be added equally strong praise of his qualifications as an accurate and methodical worker, and as a philosophical investigator in all matters connected with his profession. These and the other admirable qualities which have already been brought into view are eloquently summed up by Dr. Wells in the following passage:—
 "Dr. Heberden, my lord, stands in a manner alone in his profession. No other person, I believe, either in this or any other country, has ever exercised the art of medicine with the same dignity, or has contributed so much to raise it in the estimation of mankind. Were I, my lord, possessed of talents adequate to the undertaking, I should here endeavour to describe at full length the character of that illustrious man. In this attempt, I should first mark his various and extensive learning, his modesty in the

use of it, and philosophical distrust of human opinions in science, however sanctioned by time, or the authority of great names. I should then exhibit him in the exercise of his profession, without envy or jealousy ; too proud to court employment, yet underrating his services after they were performed ; unwearied, even when a veteran in his art, in ascertaining the minutest circumstances of the sick, who placed themselves under his care, taking nothing in their situations for granted, that might be learned by inquiry, and trusting nothing of importance to his memory. To demonstrate his greatness of mind, I should next mention his repeatedly declining to accept those offices of honour and profit at the British Court, which are regarded by other physicians as objects of their highest ambition, and are therefore sought by them with the utmost assiduity. I should afterwards take notice of his simple, yet dignified manners, his piety to God, his love for his country, and his exemplary discharge of the duties of all the private relations in which he stood to society ; and I shall conclude, by observing, that his whole life had been regulated by the most exquisite prudence, by means of which his other virtues were rendered more conspicuous and useful.”*

* Letter to Lord Kenyon, by Dr. Wells.



APPENDIX.



APPENDIX A.

GENEALOGICAL TABLE.

EDWARD HEBERDEN,
of Idsworth Park, Idsworth, near Petersfield, Hants.

THOMAS, of Chichester.

RICHARD, of the Parish of St. Saviour's, Southwark = Elisabeth Cooper, d. 1759.

THOMAS (M.D., F.R.S.),
b. 1703; d. 1769, at
Madeira.

1752, Elizabeth, dau. ¹= WILLIAM, (M.D.), F.R.S., b. 1710; d. 1801 ²= Mary, dau. of Wm. Wollaston, Esq.
of John Martin, Esq.,
M.P., d. 1754.

and other Issue.

1734. Althea ¹= THOMAS (M.A., Canon of Exeter), ² 1794. Mary Martin.
Hyde and rector of Whimble, co. Devon;
Wollaston. b. 1754; d. 1843.

WILLIAM (M.D., F.R.S.), b. 1767; = 1795. Eliz. Catherine Miller.
d. 1845.

Two daughters

THOMAS, M.D., F.R.C.P.,
b. 1802; d. 1877.

and other
Issue.

HENRY, b. 1802; d. 1828. Student
at St. George's Hospital.

and other
Issue.

NARRATIVE OF LIFE OF DR. WILLIAM HEBERDEN, JUN.

1767. DR. WILLIAM HEBERDEN, JUN., was born in the year 1767, at his
 1774, father's house in Ceeil Street. When seven years of age, he was sent
 act. 7. to school at the Charterhouse, where he acquitted himself with much credit under Dr. Beardmoor, then head master. He left head of the school, and went to St. John's College, Cambridge.

1788, In 1788, in his twenty-second year, he took his B.A. degree, having
 act. 22. distinguished himself in the Mathematical Tripos, and having taken the Chaneellor's medal in elassies and the members' prizes on two several occasions, he was elected to one of the open fellowships at St. John's.

He then went to London and studied medicine at St. George's Hospital, where he subsequently became physician.

1797, In 1797, at the age of thirty-one, he became a Fellow of the
 act. 31. College of Physicians, and soon obtained a fairly large practice.

1802, In 1802, the year after his father's decease, he edited and published
 act. 36. his father's "Commentaries." Shortly afterwards he published a work of his own, "Epitome Morborum Puerorum," and contributed several papers to the Philosophical Transactions of the Royal Society, of which he was a Fellow. The inscription on the statue of Addison in Westminster Abbey is also his work.

1809. On the death of Sir George Baker in 1809 he was made physician
 act. 40. to his majesty King George III., by whom he was more than once offered a baronetey and a pension, both of which he always declined.

1812, In 1812 he was left a widower with nine young children. This
 act. 52. bereavement entirely echanged his life ; he gave up all professional work save attendanee at Windsor Castle, and retired to the village of Datehet in Bucks, where he lived for fourteen years, devoting himself to his children and to literary work.

He printed and dedicated to his children a "Translation from Plutarch on Brotherly Love," a "Treatise on General Education," and a translation of Cicero's letters to Attieus, in 2 vols. 8vo.

1826, In 1826 he returned to London to watch over the education of his
 act. 67. son, a student at St. George's Hospital.

1828, In 1828 this son cut his hand at a post-mortem examination, and
 act. 69. died of pyæmia within a week.

In the following year he lost another son.

In 1830 he published a work entitled "Reflections on the Gospel of St. John."

In 1836 he printed a translation of the "Catholic Epistles" for private circulation.

In 1839 he published a translation and commentary on the Epistles and Book of Revelation. 1839, æt. 70.

On the 19th February, 1845, at the age of seventy-eight, he died at his residence in Cumberland Street (leaving many children and grandchildren), and was buried in the family vault in the parish church of Windsor. 1845, æt. 78.

With regard to his character it may be well said that he was a son in all respects worthy of his father.

APPENDIX B.

DR. HEBERDEN'S WORKS—(1) PROFESSIONAL.

Course of Lectures on Materia Medica. Unpublished MS., containing 29, in the possession of Dr. Pettigrew.

A pamphlet entitled *Αντιθηριακα* ; or, An Essay on Mithridaticum et Theriacum. First published work, A.D. 1745.

Papers (5) contributed to the Philosophical Transactions of the Royal Society :—

1. An Account of a very large Human Calculus. Preserved in the Library of Trinity College, Cambridge. Phil. Trans. vol. xlv. p. 596. A.D. 1750.
2. An Account of the Effects of Lightning at South Weald in Essex. Phil. Trans. vol. liv. p. 198. A.D. 1764.
3. An Account of a Stone voided without Help from the Bladder of a Woman at Bury. Phil. Trans. vol. lv. p. 128. A.D. 1765.
4. Of the Different Quantities of Rain which appear to Fall, at Different Heights, over the same Spot of Ground. Observations taken from 7th July, 1766, to 7th July, 1767. Phil. Trans. vol. lix. p. 359. A.D. 1769.
5. Table of the Mean Heat of the Different Months in London. Phil. Trans. vol. lxxviii. p. 86. A.D. 1778.

1739-40. All their names were an ornament to the place."—*Preface to Edition of 1781.*

Their names were—

Hon. Mr. Yorke, Earl of Hardwick.

Hon. Charles Yorke.

Rev. Dr. Rooke, Master of Christ's College, Cambridge.

Rev. Dr. Green, Bishop of Lincoln.

Dr. Heberden.

Daniel Wray, Esq.

Rev. Mr. Heaton, Bennet College.

Henry Coventry, Esq.

Rev. Mr. Lawry, Prebendary of Rochester.

Mrs. Catherine Talbot.

Rev. Dr. Birch.

Rev. Dr. Salter, Master of the Charterhouse.

Grey's Hudibras. Published 1744. In his early life Dr. Heberden contributed some notes to Grey's Hudibras, as acknowledged by that Editor in his preface.

Dr. Heberden wrote the epitaph in Dorking Church on Mr. Markland.

THE END.

